

The South Shore Coastal Hazards Atlas

An Overview

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Project Funded by the Massachusetts Office of Coastal Zone Management



SOUTH SHORE COASTAL HAZARDS CHARACTERIZATION ATLAS



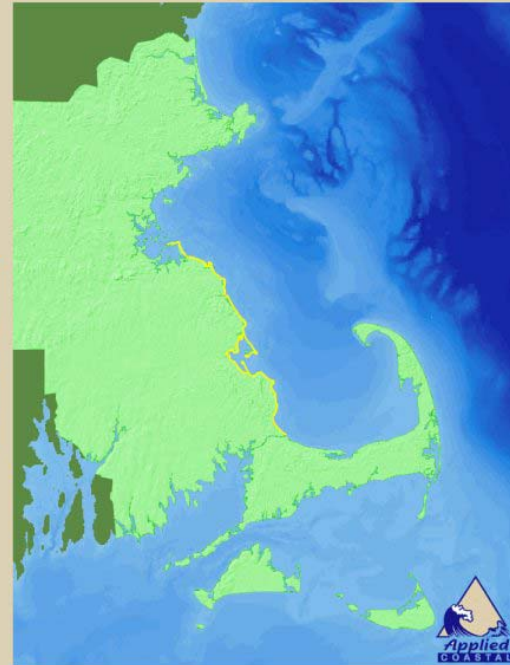
Prepared for:

Massachusetts Office of
Coastal Zone Management



Prepared by:

Applied Coastal Research
and Engineering, Inc.



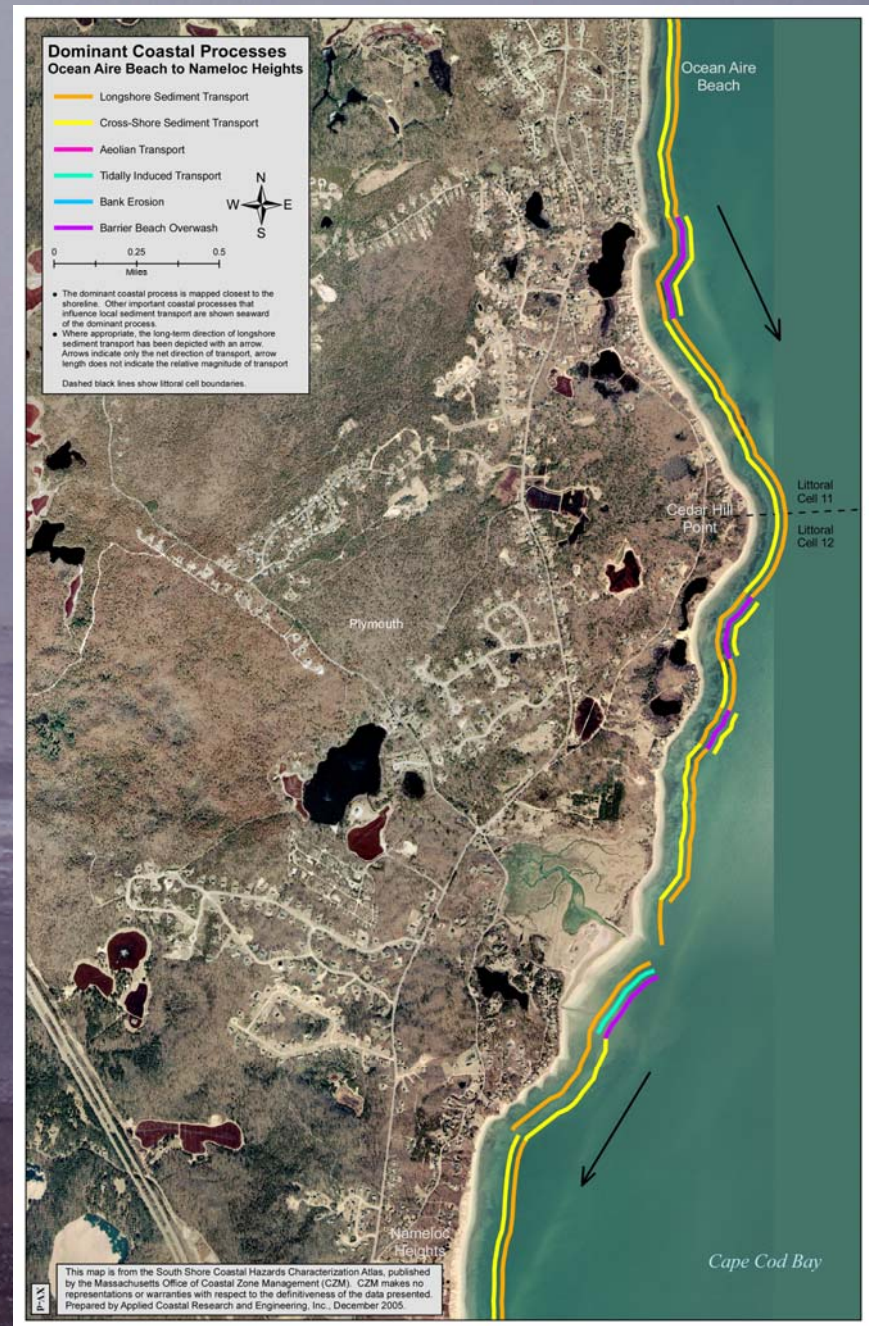
**Purpose: Aid project review in areas
where these projects may be vulnerable
to coastal hazards**

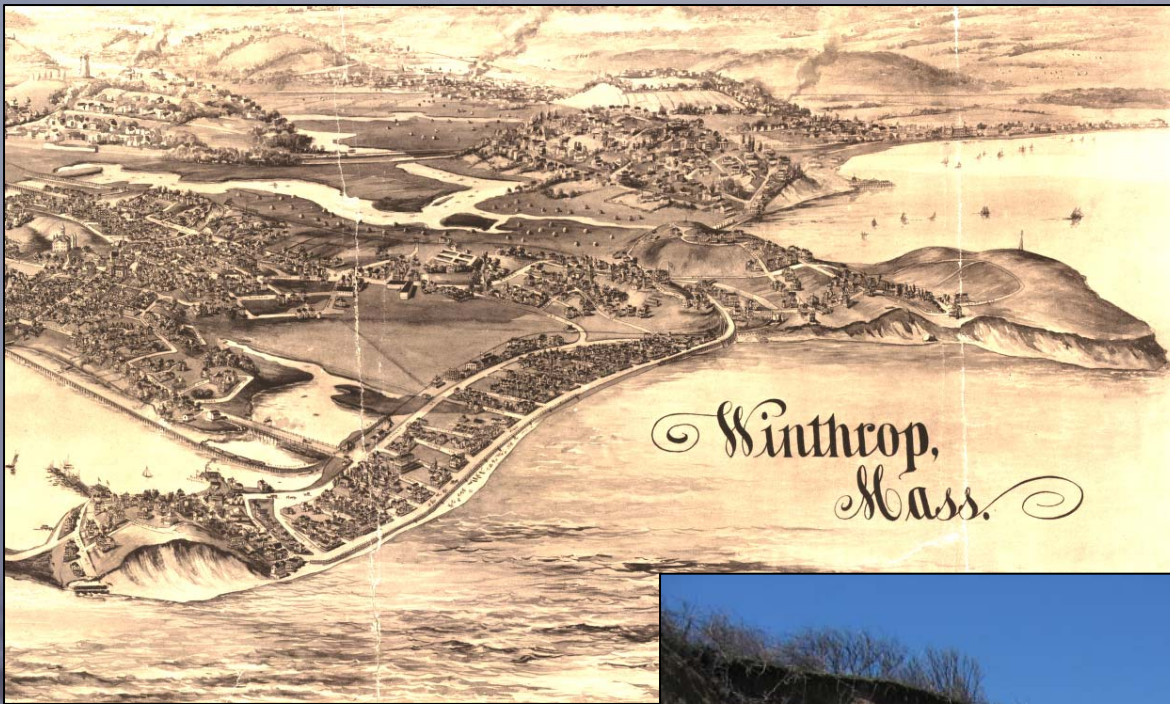


Project Variables

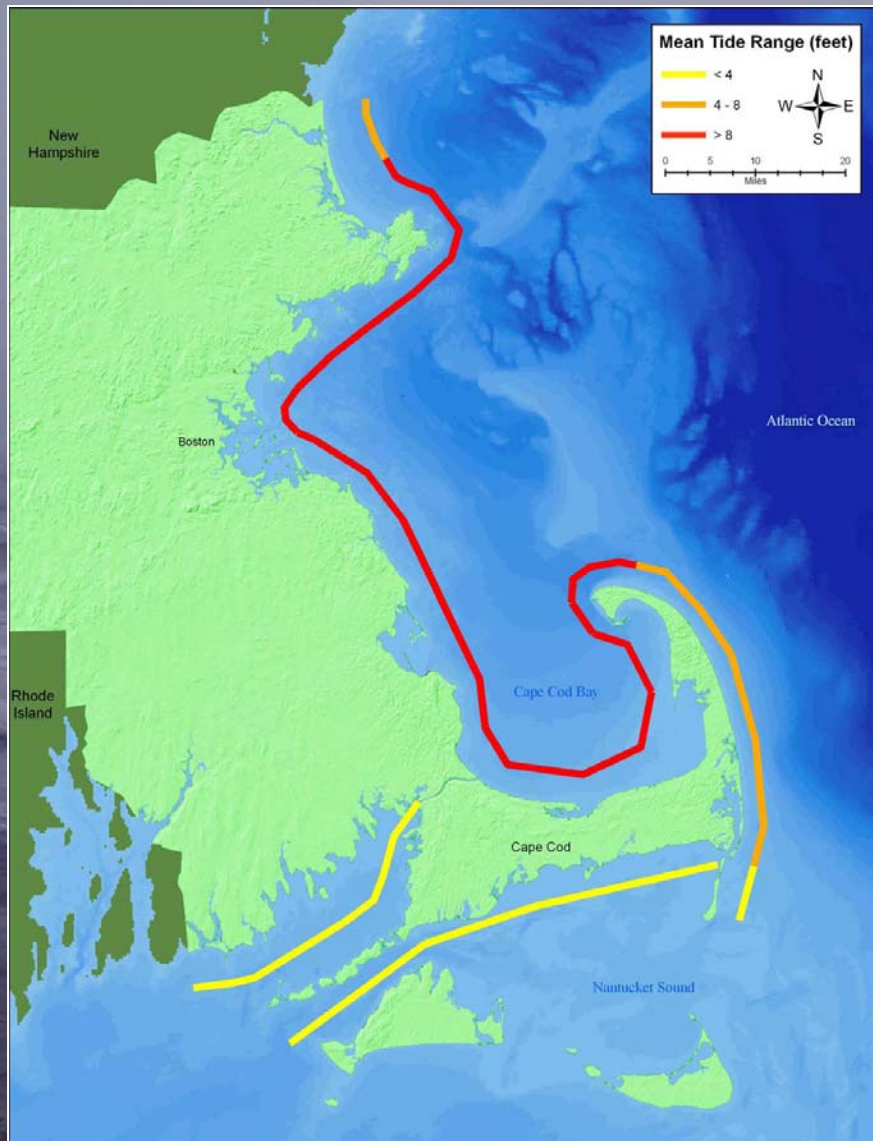
- littoral cell and coastal processes
- shoreline change
- shoreline type (geology)
- beach width fronting coastal banks
- relative sea-level rise
- coastal engineering structures
- wave climate
- storm susceptibility
- repetitive loss properties

Determine site-specific coastal processes influencing shoreline performance (primarily sediment transport)

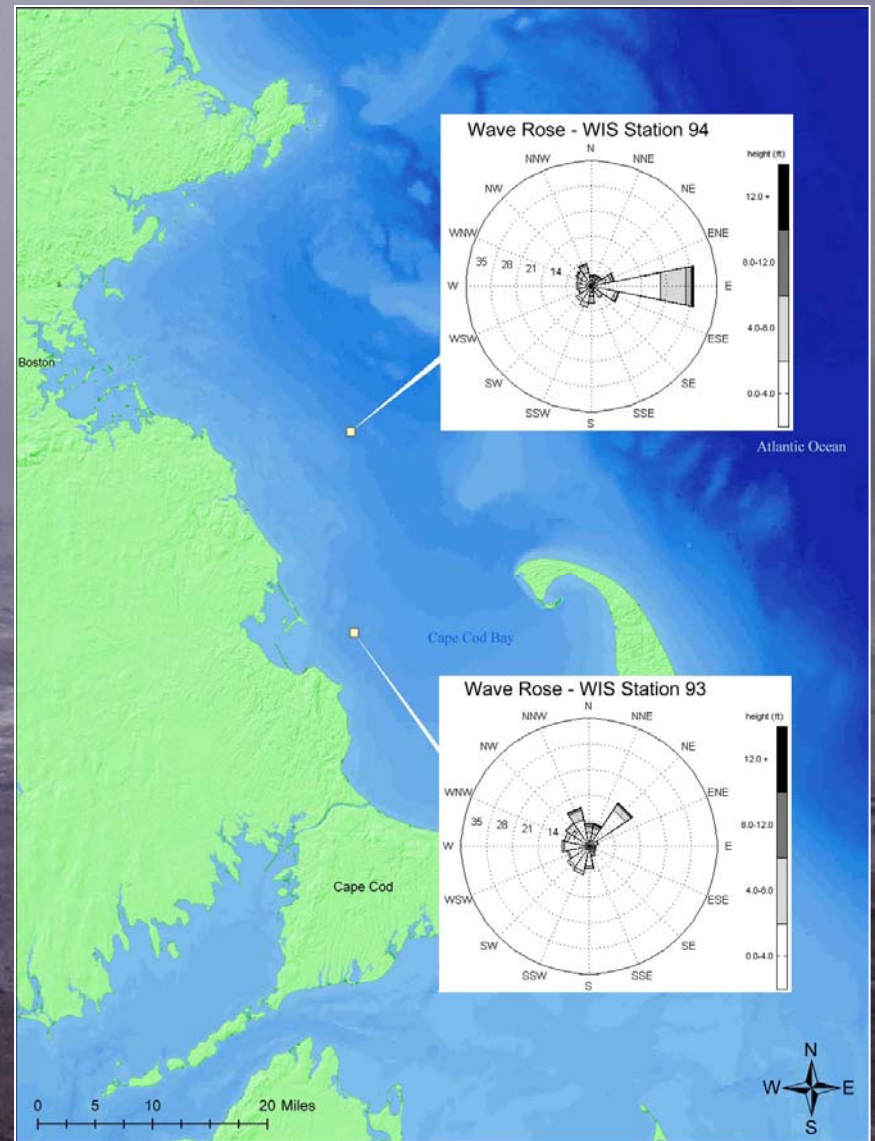




Tide Range



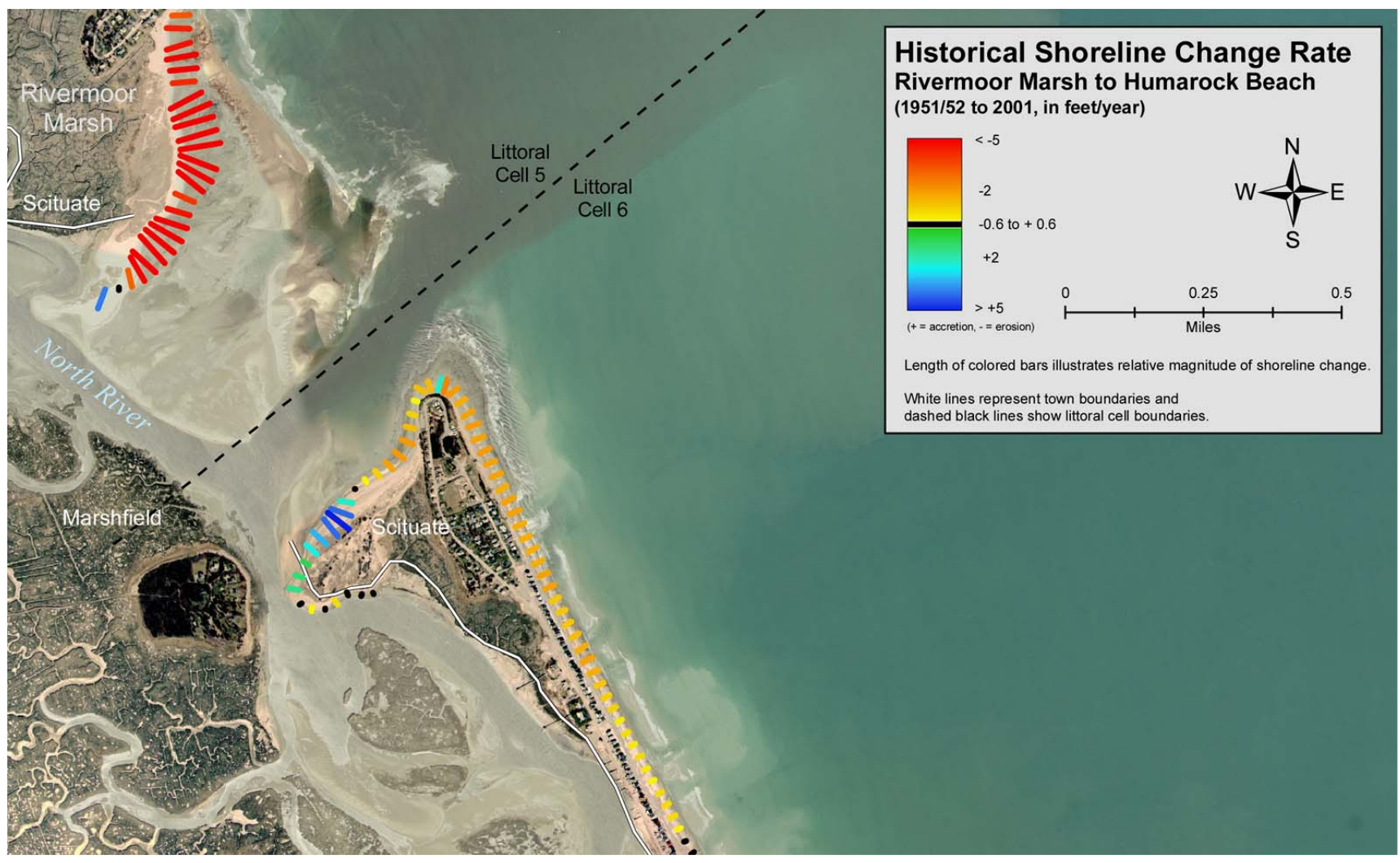
Wave Climate

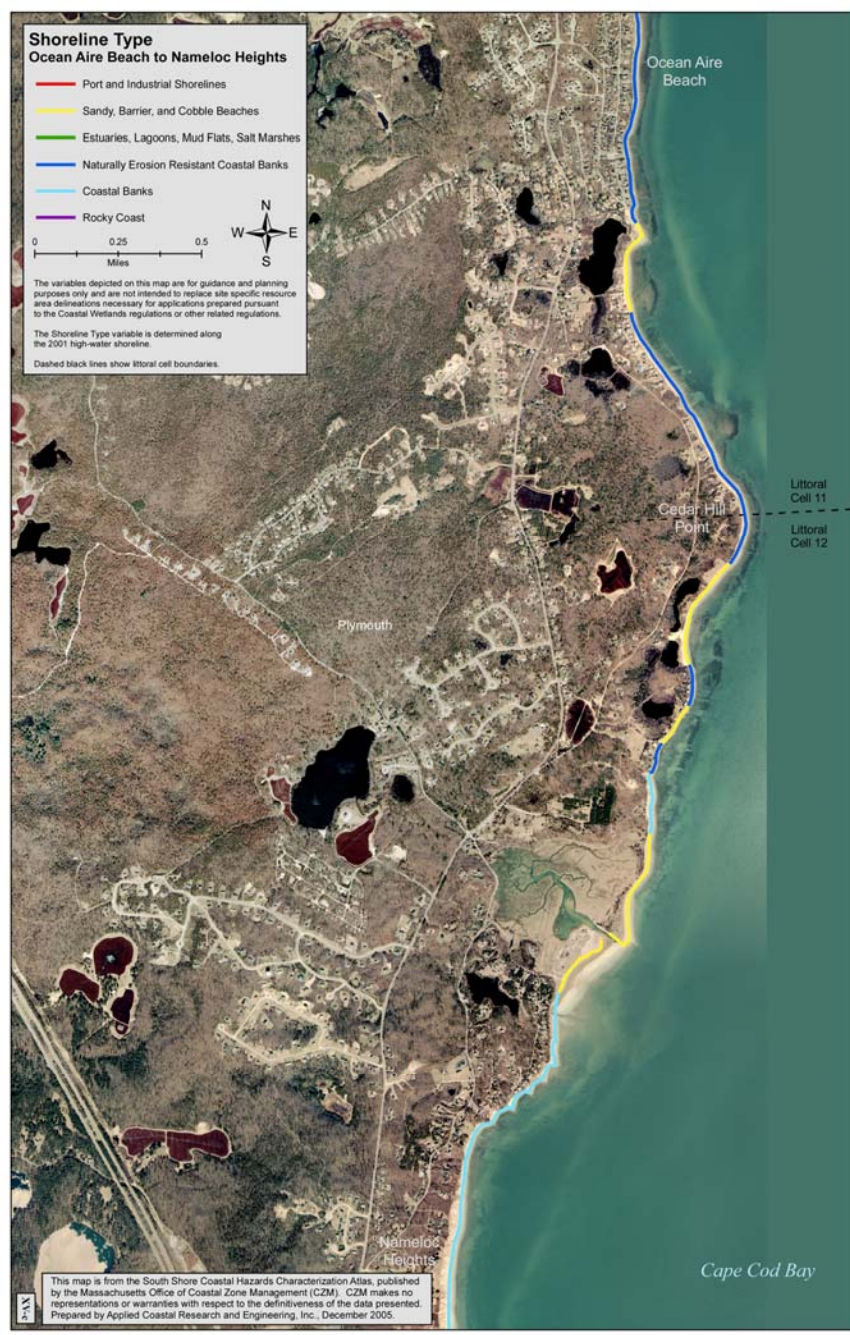


Historical Shoreline Change Rate

1950s to 2001







Shoreline Type

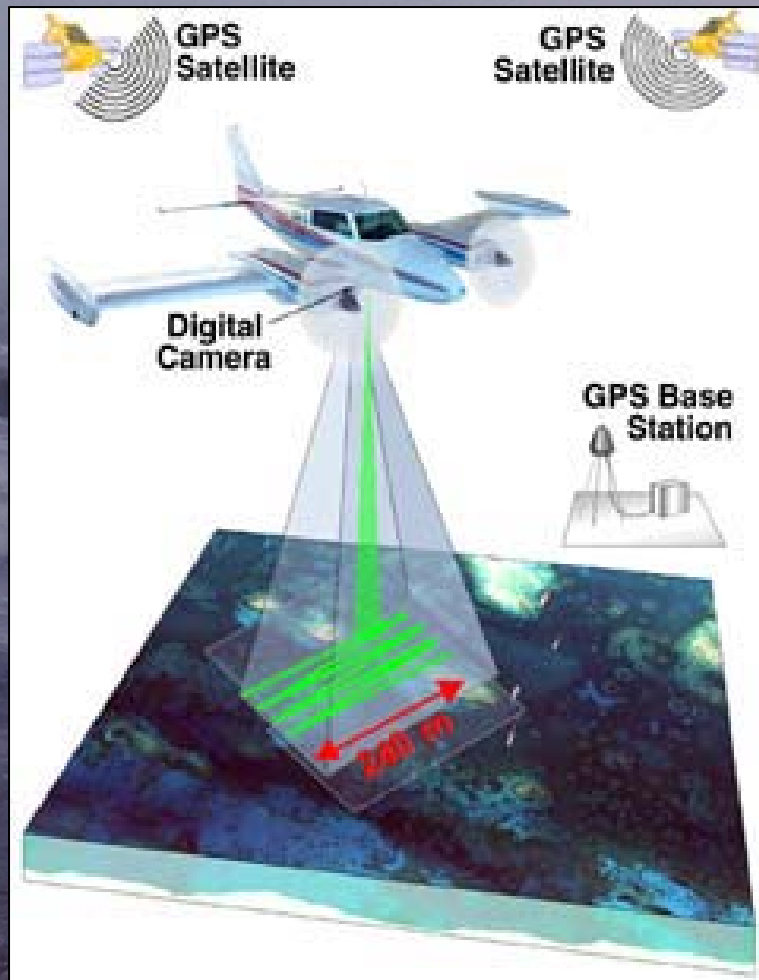
- Sand or Cobble Beach
- Estuaries or Salt Marsh
- Coastal Banks
- Rocky Coast

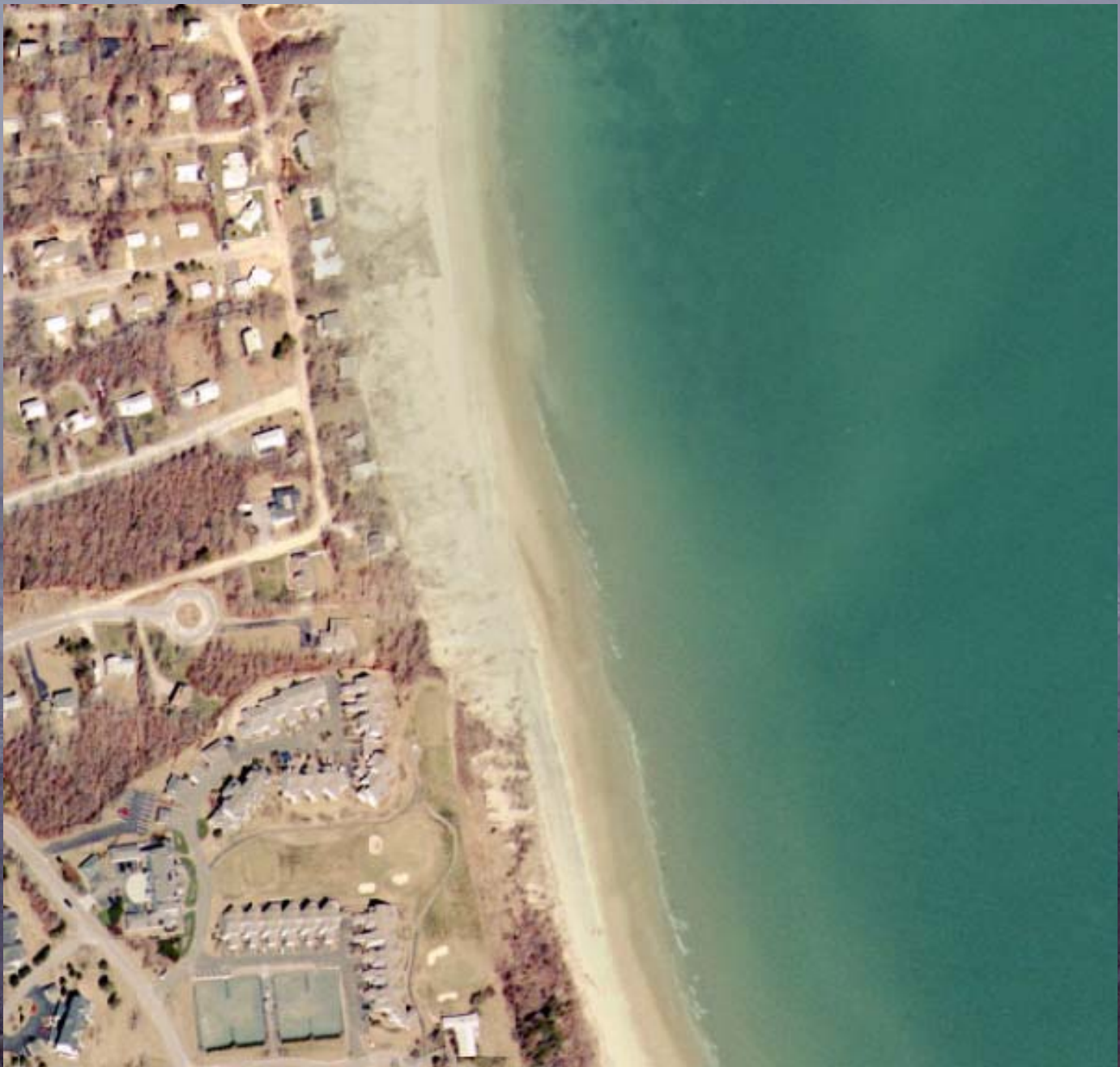


Beach Width Fronting Coastal Banks

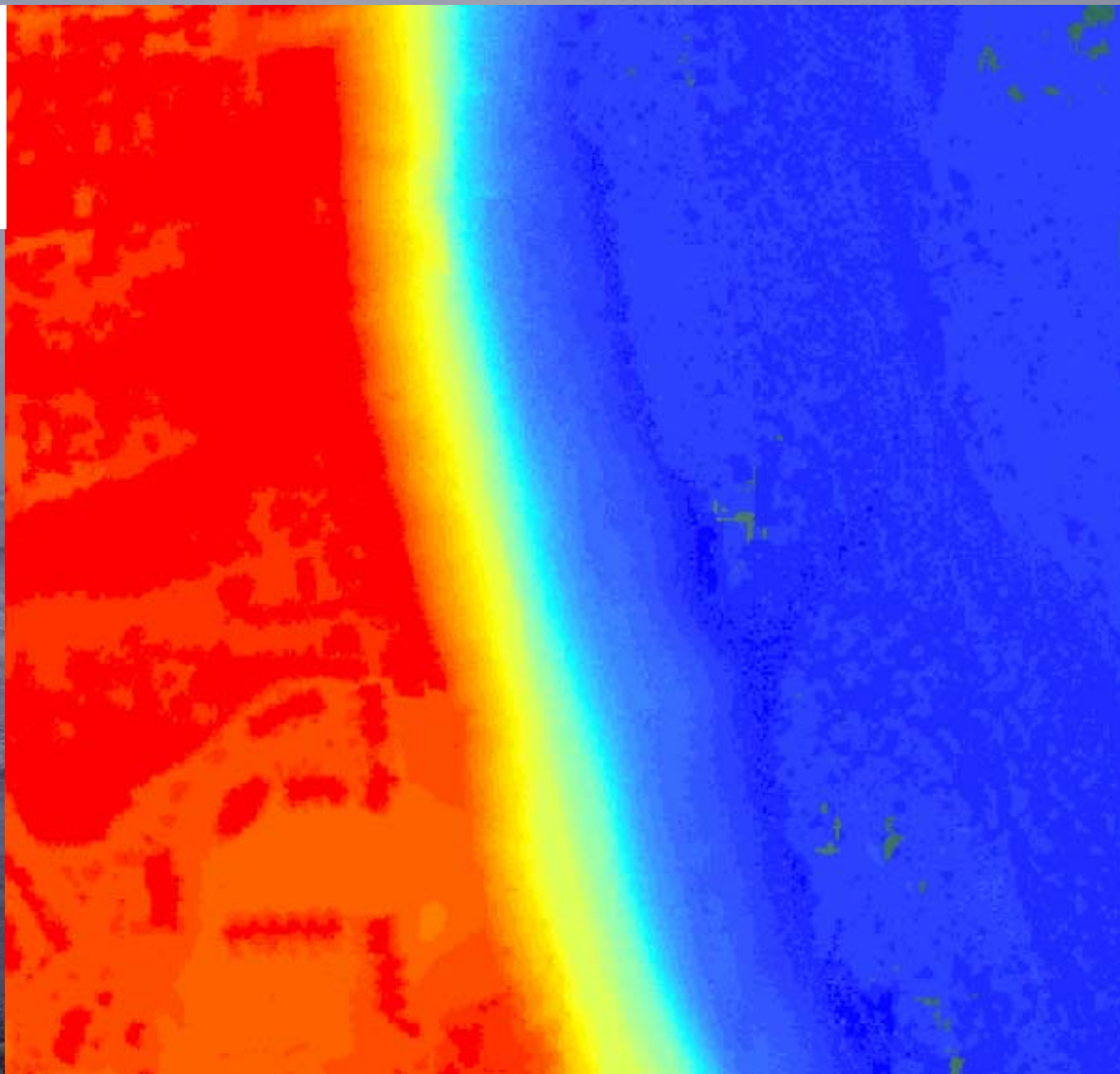
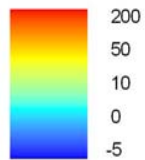


LIDAR and DGPS

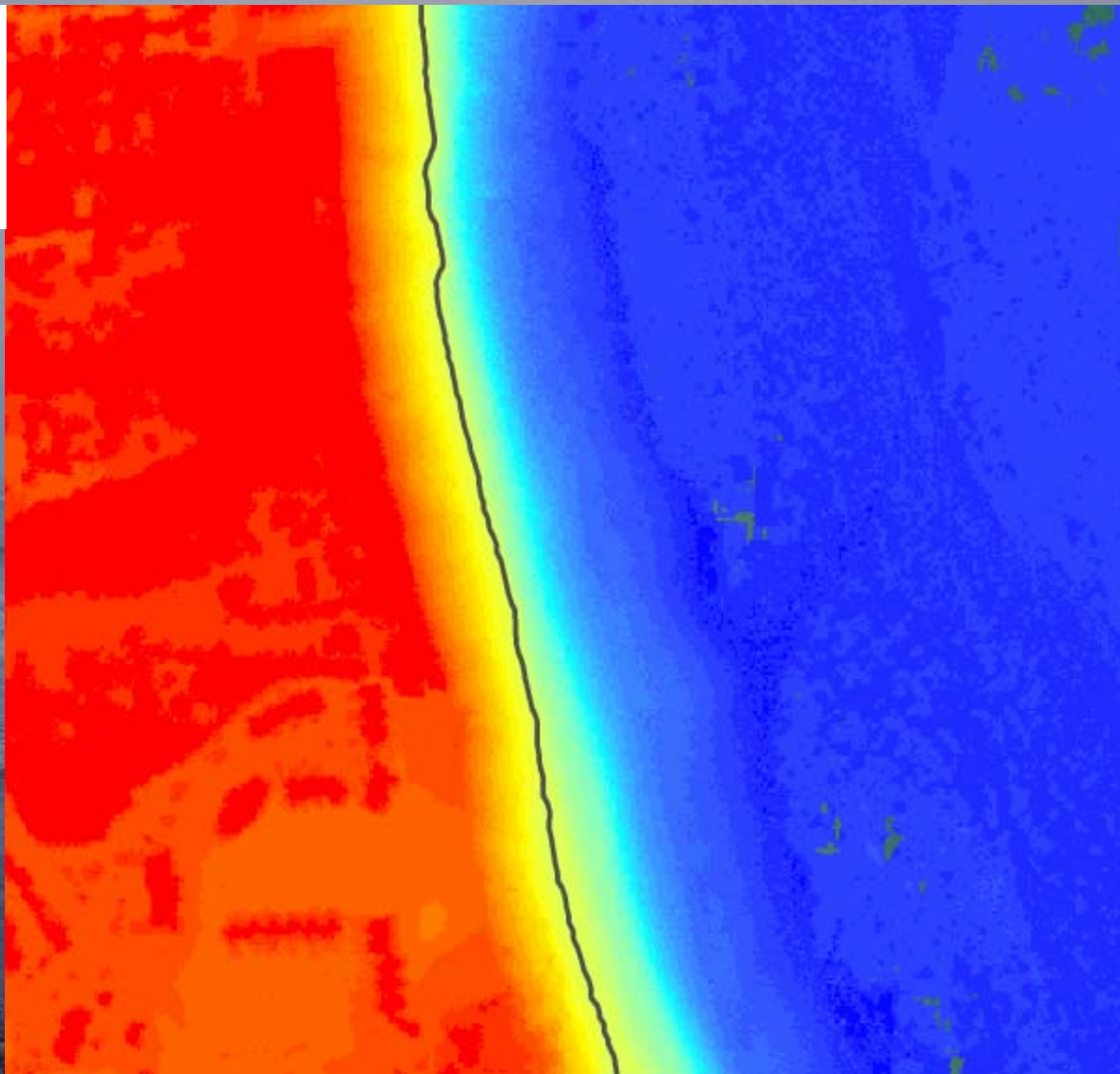
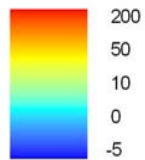


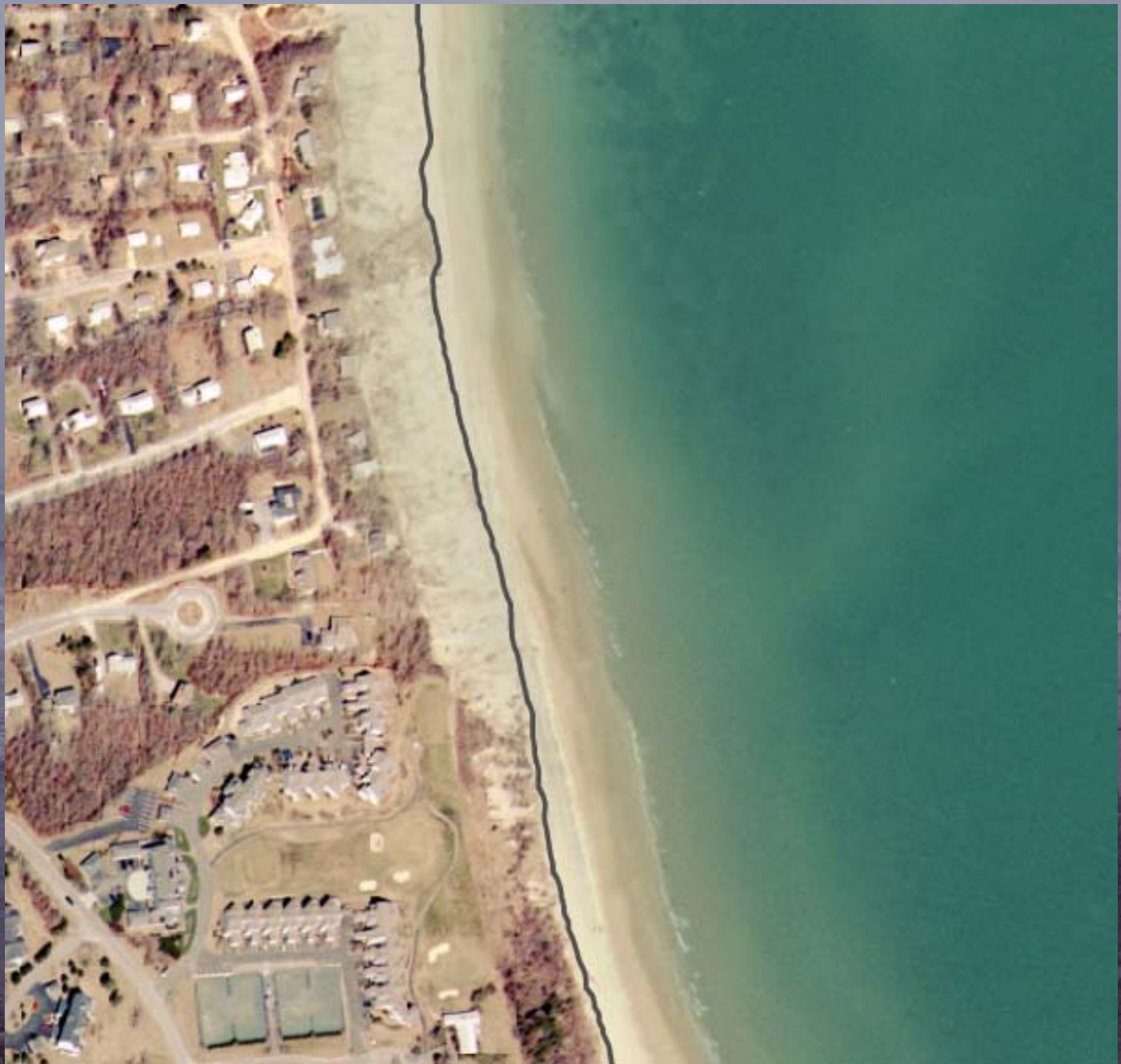


Elevation (ft)

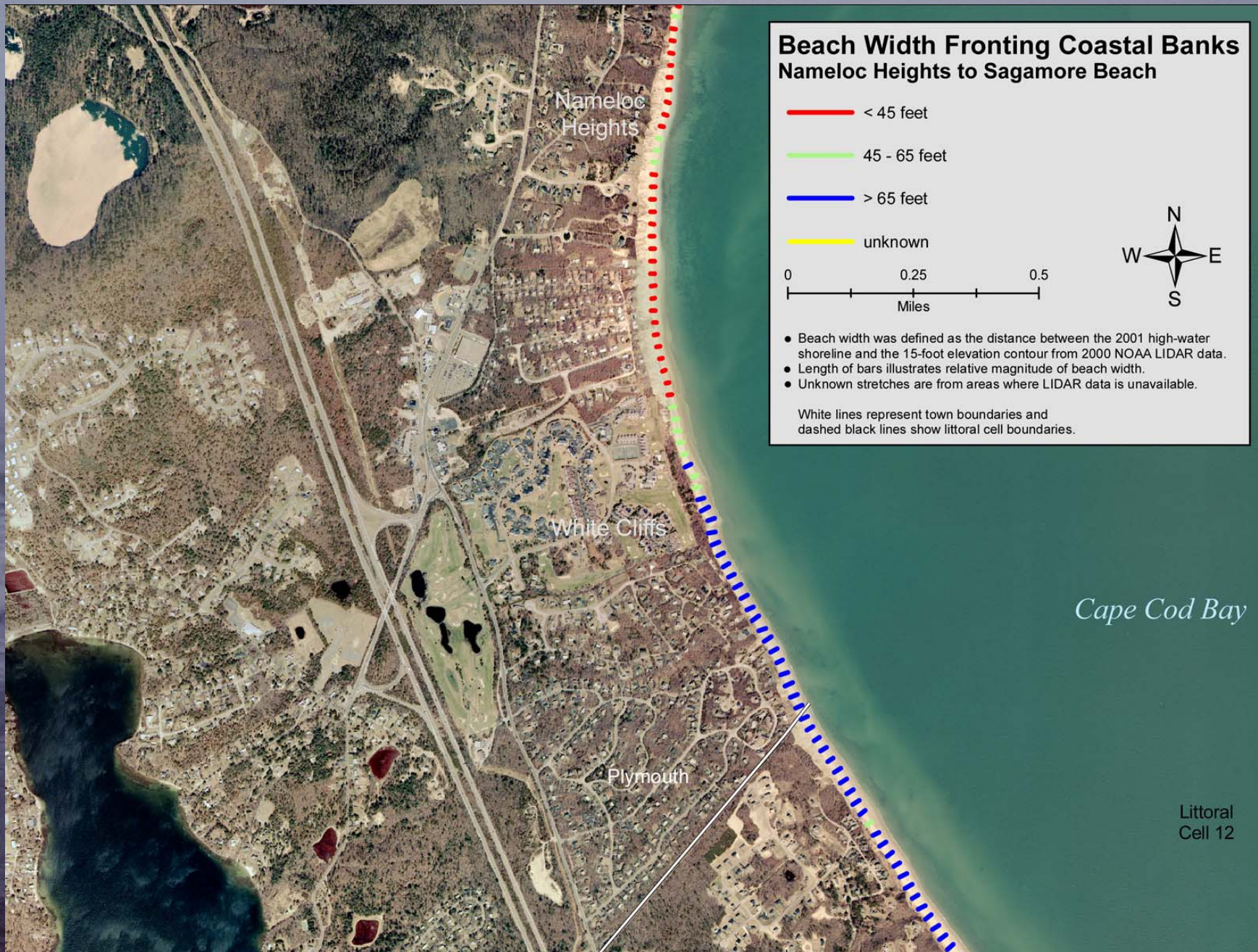


Elevation (ft)

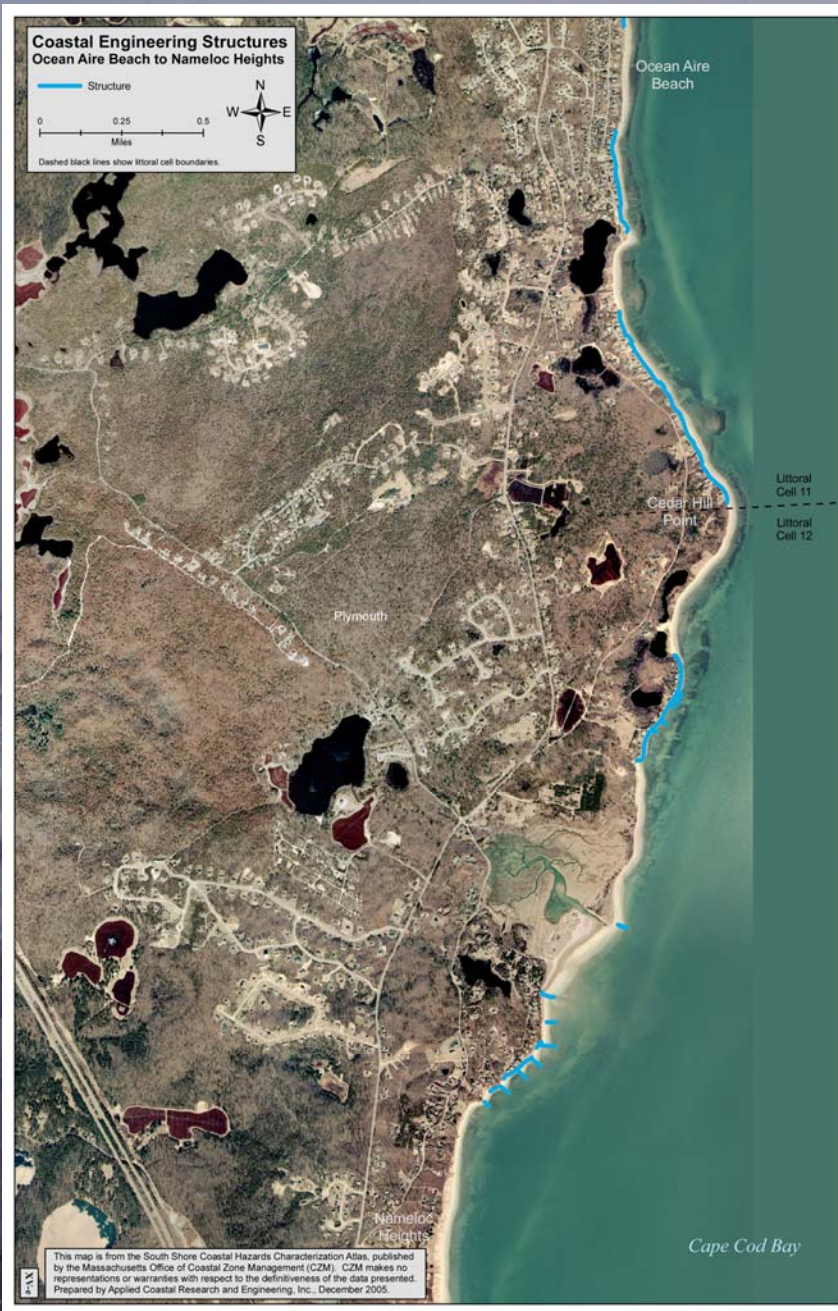


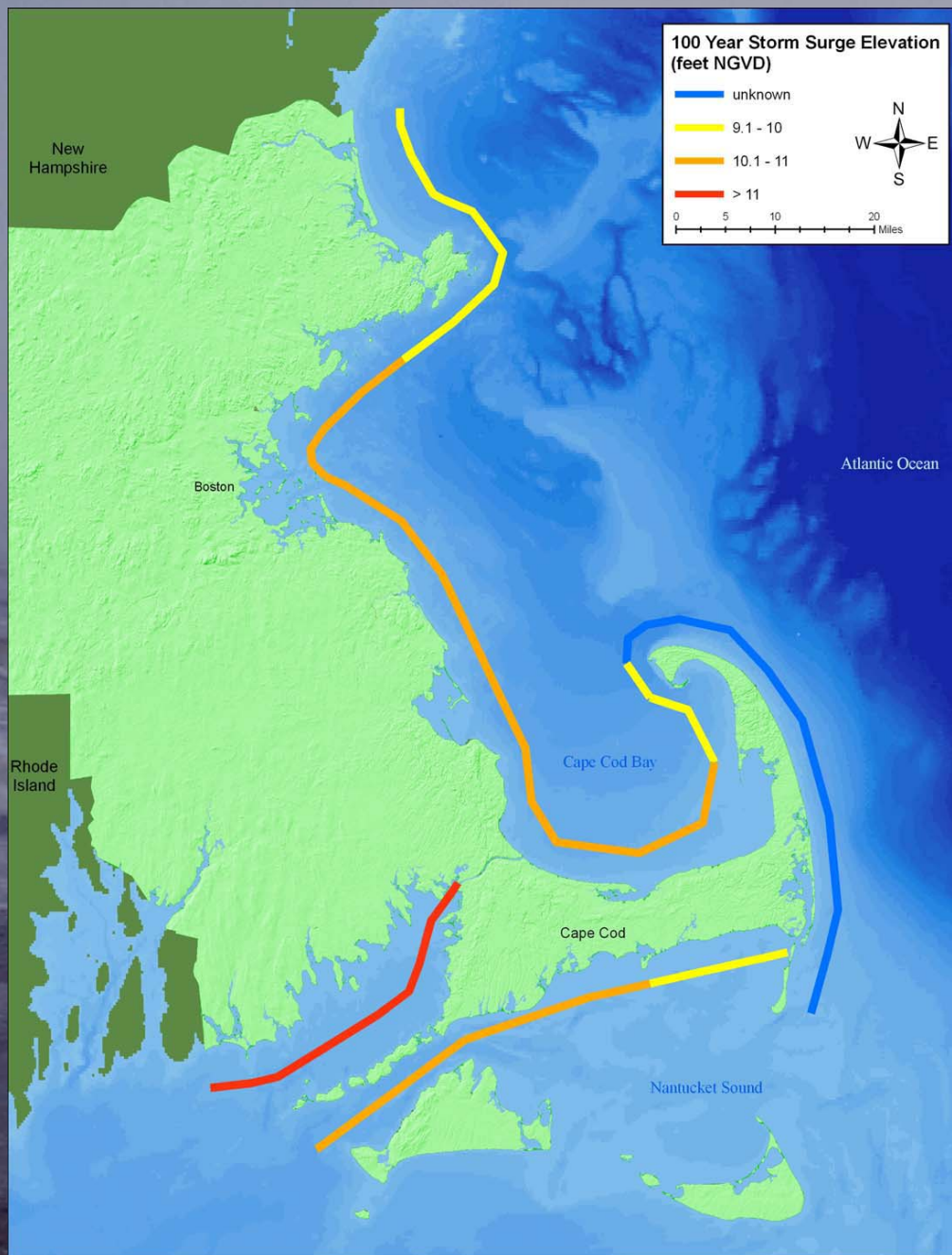






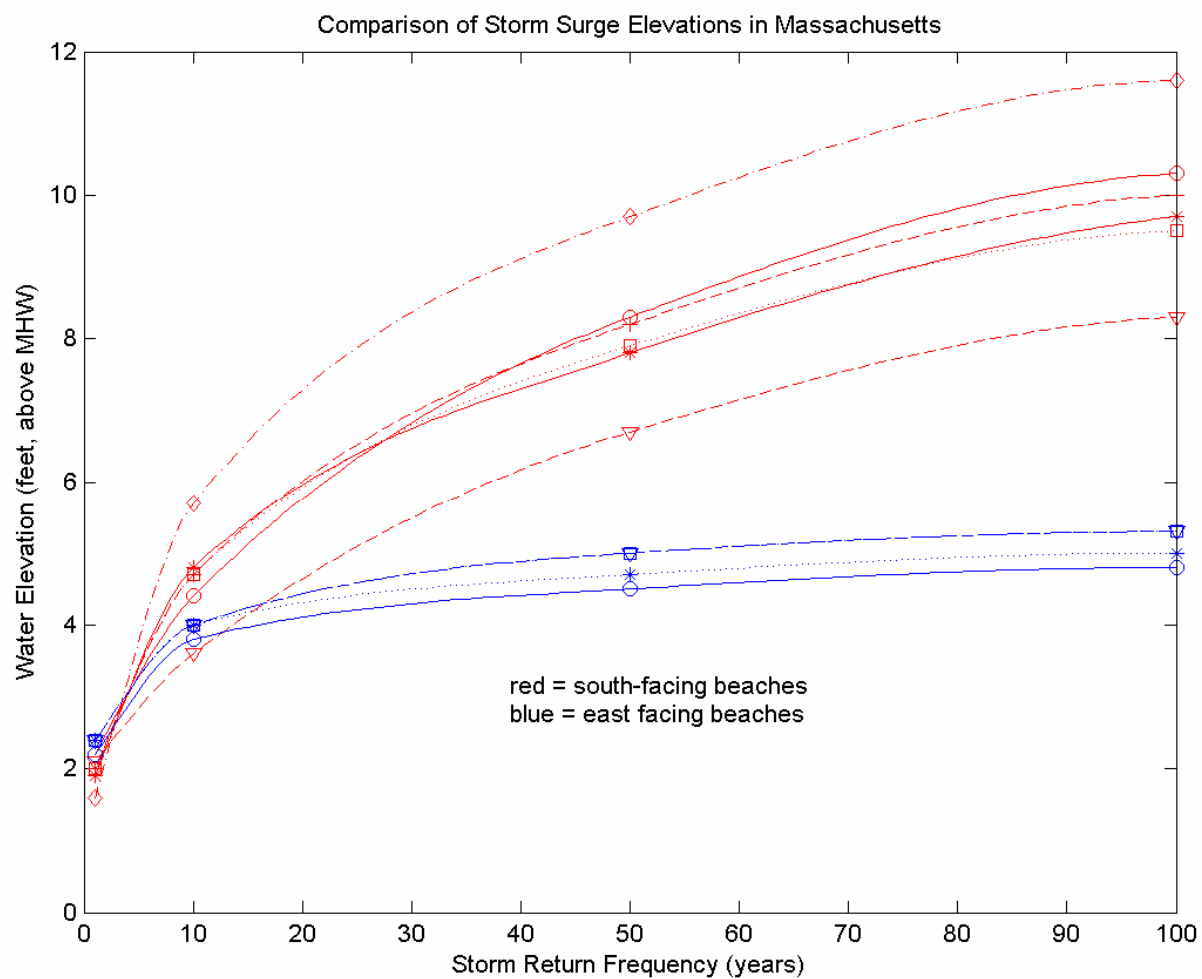
Coastal Engineering Structures

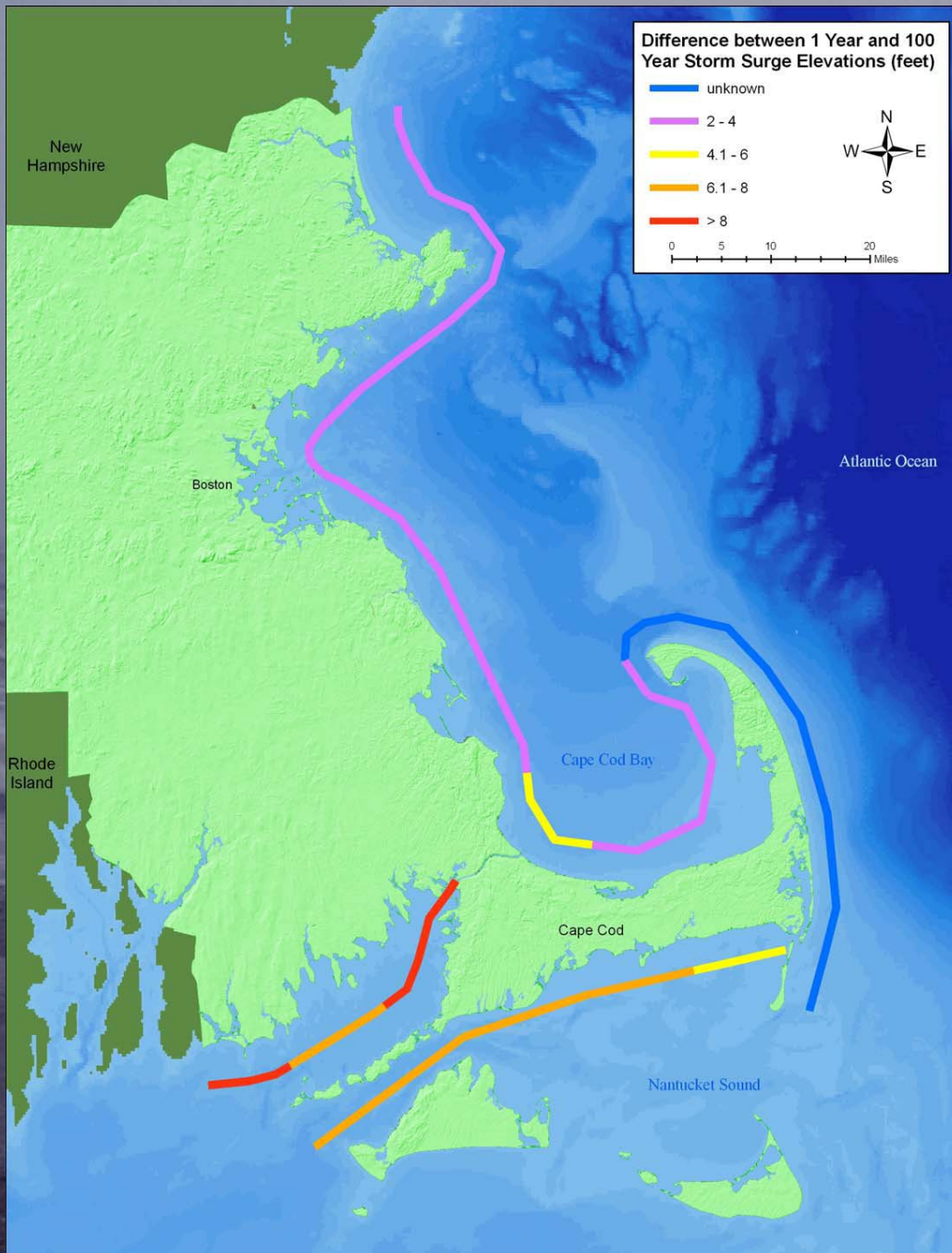




Storm Susceptibility

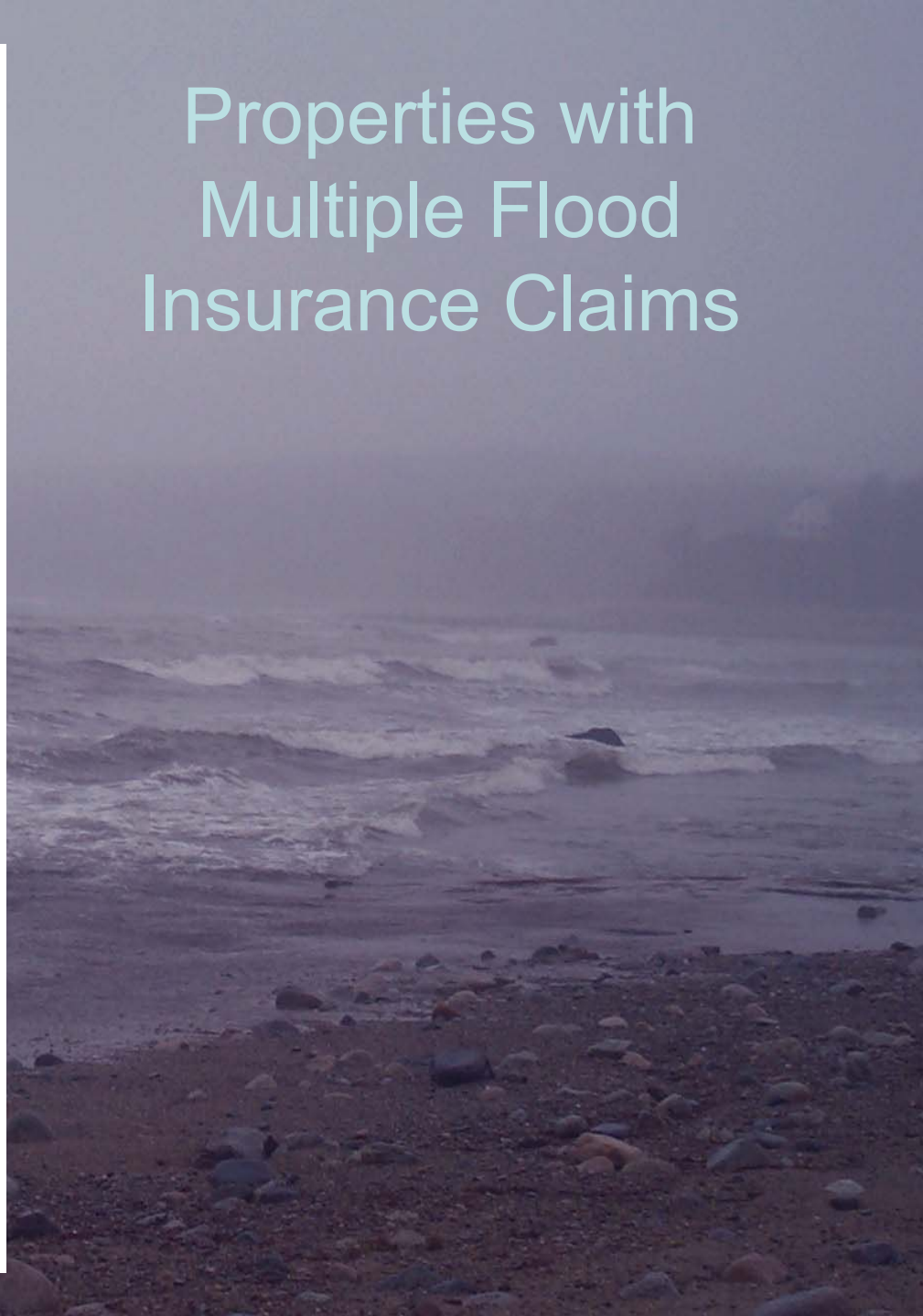
100-Year Surge Levels





Storm Susceptibility

Difference
Between
1-Year
And
100-Year
Surge Levels

A dark, moody photograph of a rocky beach. The foreground is filled with dark, wet rocks and pebbles. The ocean is turbulent, with white-capped waves crashing against the shore. The sky is a heavy, overcast grey, creating a somber and dramatic atmosphere. The overall color palette is muted, with shades of grey, blue, and brown.

Properties with Multiple Flood Insurance Claims



Questions?

**Applied Coastal Research and
Engineering, Inc.**

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Mark Osler, and Mark Byrnes**

